

STATE OF CALIFORNIA

CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

Base Year Modification Request Certification

Part 2: Generation Study - Includes Extrapolation of Residential or Non-Residential Diversion Data

To request a substitution for a previously approved base year used in calculating the diversion rate for your jurisdiction, please complete and sign this form and return it to your Office of Local Assistance (OLA) representative at the address below, along with any additional information requested by OLA staff. When all documentation has been received, your OLA representative will work with you to prepare for your appearance before the Board. If you have any questions about this process, please call (916) 341-6199 to reach your OLA representative.

Mail completed documents to:

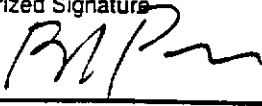
California Integrated Waste Management Board
Office of Local Assistance (MS - 25)
1001 I Street
PO Box 4025 (mailing address)
Sacramento, CA 95812-4025

General Instructions:

Please check the box for the **ONE** choice below that best explains your request to the Board.

- ☒ 1. Use a recent generation-based study to calculate our current reporting year generation amount, but not officially change our existing Board-approved base year.
- ☐ 2. Use a recent generation-based study to officially change our existing Board-approved base year to a new base year.

The shaded cells on these sheets are protected. If you have problems using these sheets, please contact your Office of Local Assistance representative by calling (916) 341-6199.

Section I: Jurisdiction Information and Certification			
<i>All respondents must complete this section.</i>			
I certify under penalty of perjury that the information in this document is true and correct to the best of my			
Jurisdiction Name		County	
Redwood City		San Mateo	
Authorized Signature 		Title	
		Finance Director	
Type/Print Name of Person Signing	Date	Phone () Include Area Code	
Brian Ponty	1/10/01	(650) 780-7072	
Person Completing This Sheet (please print or type)		Title	
Nanette Sartoris		Senior Associate, Environmental Science Associates	
Affiliation:	Consultant		
Mailing Address	City	State	ZIP Code
225 Bush Street, Suite 1700	San Francisco	CA	94104-4207
E-Mail Address: nsartoris@esassoc.com			

Section II: Information for New Generation-Based Study

Attach additional sheets if necessary—reference each response to the appropriate cell number (e.g., "4").

Note: New base years must be representative of a jurisdiction's disposal and diversion.

1. Current Board-approved existing base year:	2. Proposed new generation-based study year:
1997	2000

3. Explain how the proposed generation study year is representative of average annual jurisdiction disposal and diversion:

The City believes that the 2000 generation rate enumerated here is representative of the average annual jurisdiction disposal in recent years. The slightly higher disposal in 2000 is consistent with the flourishing economy in 2000 and the shift in material from the City's largest generator (an auto shredder facility) going to an out-of-county landfill (with a low tipping fee) where the auto shredder fluff is landfilled rather than being used as ADC.

With respect to diversion, Redwood City has implemented all of the programs selected in its SRRE, or suitable alternatives thereto. The City continues to emphasize programs targeting the residential, commercial and industrial waste sectors; program activity in 2000 is described in the PARIS Report notes submitted separately and electronically as part of its 2000 Annual Report.

The City believes that the year 2000 diversion tons reported here are representative of actual diversion in 2000 and are consistent with diversion program implementation within the City. Also, note that the total volume extrapolated (see Section 10) equals less than 0.5 percent of the diverted waste stream. As an example of the increasing effectiveness of diversion programs, the tons diverted under the City's residential curbside greenwaste collection and segregated self-haul greenwaste programs at the San Carlos Transfer Station and Ox Mountain LF have more than doubled (from 5,049 tons to 12,647 tons) since 1997. The City has also participated in regional programs targeting construction and demolition waste. These efforts include: 1) a program at the transfer station that segregates and recovers loads of clean rock, concrete, and asphalt roofing; 2) recovery of C&D material and debris box materials at Ox Mountain LF; 3) publication of the Construction Site Recycling & Reuse Guide – A Directory of C&D Material Recycling Locations in San Mateo County; and 4) participation in C&D workshops for contractors and city staff.

An unusually high portion of the City's diversion comes from materials used as alternative daily cover (ADC) at in-county and out-of-county landfills. Of the 89,472.29 tons of material used as ADC in 2000, the most significant contributions to this total included roughly 58,254 tons of auto shredder fluff and 9,222 tons of biosolids; auto shredder fluff and biosolids made up approximately 65% and 10% of the City's total ADC, respectively. Together, ADC accounted for 79.5% of the diversion reported for the City in this generation-based study. Some of the materials used as ADC (such as greenwaste and C&D Debris) were collected under programs administered by the City's franchised hauler. To demonstrate the City's commitment to a better end use for greenwaste materials than use as ADC, the City participated with other SBWMA jurisdictions in amending the hauler's operating agreement to phase out the use of greenwaste collected by the hauler and used as ADC at Ox Mountain LF. Greenwaste materials used as ADC at Ox Mountain LF will be phased out entirely by March 2002. Currently, there are no other known uses available for auto shredder fluff and few available for biosolids. Use of auto shredder fluff as ADC has proven beneficial to local soil-deficient landfills.

For the reasons described above, the City believes the proposed generation study year is representative of actual generation in the City in 2000.

4. Enter diversion rate information below.

Diversion rate calculated using existing base year	a. 44%	Diversion rate calculated using new generation-based study	b. 47%
For existing base year pounds/person/day based on generation	13.5	For new generation based study pounds/person/day based on generation	16.7
Residential 32 % Non-Residential 68 %		Residential 16.7 % Non-Residential 83.3 %	
Population existing generation-based study	73,000	Population new generation-based study	78,000

5. If there is an increase from 4a to 4b, please explain how the new diversion rate is consistent with your current diversion implementation efforts. If the proposed new generation tonnage results in an increase in your pounds/person/day, please explain how this is consistent with your current diversion implementation efforts and provide examples (e.g., change in jurisdiction's demographics).

Regarding diversion implementation efforts, see response to Question 3 above and PARIS Report program notes submitted separately and electronically as part of the 2000 Annual Report process. The City has documentation to substantiate all diversion claims for 2000.

The proposed new generation tonnage results in an increase in the per capita generation rate from 15.7 to 16.7 pounds/person/day when comparing the generation calculated using the existing base year to that calculated as part of this generation-based study. The 2000 generation tonnage reported for Redwood City is based on actual disposal and diversion tons. The higher-than-average per capita generation rates can be explained in part by the large industrial facilities within the City, such as the South Bayside System Authority Wastewater Treatment Plant that treats wastewater from nine jurisdictions in San Mateo County and an auto shredding facility, among others.

6. If the difference between the proposed diversion rates in 4a and 4b is greater than 5 percentage points, please explain the specific reasons for the difference. (For example: new/improved curbside diversion programs.)

Not applicable.

7. Disposal Tonnage (enter values):		24002	101127	125129	Total		
		Residential	Non-Residential				
Please select the ONE choice below that best explains your disposal data and complete the required tables.							
<input checked="" type="checkbox"/> a. All tons claimed are from the Board's Disposal Reporting System (No explanation required. Go to Section 8.) <input type="checkbox"/> b. All tons claimed are from a 100 percent audit of hauler and self-haul tonnage. (Please complete Reporting Year Tonnage Modification Request and Certification sheet found at www.ciwm.ca.gov/LG_Central/Forms/rvnmrdq.doc) <input type="checkbox"/> c. Some Disposal Reporting System data were corrected. (Please complete Reporting Year Tonnage Modification Request and Certification sheet found at www.ciwm.ca.gov/LG_Central/Forms/rvnmrdq.doc)							
8. In the table below, list the summarized diversion activities and diversion data records that support your claim and are available for Board audit. (Note: the Board expects the jurisdictions to be able to provide all backup documentation, if requested.) Include type of record and location—for example, weight tickets from transfer stations. This section should capture all diversion tonnage (sheet will perform all addition calculations). If any diversion is from restricted wastes (i.e., agricultural wastes, inert solids [e.g. concrete, asphalt, dirt, etc.], white goods, and scrap metal), please identify those programs/waste types and fill out section 11. Note: Restricted waste material should not be extrapolated in non-residential waste audits. Please mark as attachment 8 all copies of survey sheets.							
* Please provide detailed non-residential waste audit information in Section 9. Note: The Board has indicated that it will be scrutinizing total source reduction amounts greater than 5% of total generation. Please be prepared to provide additional details substantiating your claim.							
Diversion Activity	Actual Tons	Estimated or Extrapolated Tons	Total Tons	Relative Percent to Total Generation (A+B)/Total Generation	Specific Material Type(s) (List programs with multiple materials together)	Specific Conversion Factor Used (if any) and Source	Type of Record and Location of Record
Residential Source Reduction Activities							
Backyard Composting	711.0	0.0	711.0	0.3%	Organic Matter	646 lbs/bin/year, San Mateo County Composting Program	Bin Distribution Record; San Mateo County Composting Coordinator
Grasscycling							
Other Residential Source Reduction (list each program separately)	11.4	0.0	11.4	0.0%	Textiles (Diapers)	Baby's Diaper Services; tons reported distributed throughout County on basis of population	ESA 1997 Diversion Survey; ESA Database
Thrift Stores	0.0	603.2	603.2	0.3%	Misc.	Thrift store staff; tons reported allocated on basis of information provided by thrift store staff. See Section 10.	ESA 1997 Diversion Survey; ESA Database
Subtotal, Res. Source Reduction	722.4	603.2	1,325.6	0.6%			
Residential Recycling Activities							
Curbside Recycling	6,118.0	N/A	6,118.0	2.6%	OCC, ONP, MP, Bottles & Cans	NA	BFI MIS Reports for 2000; San Carlos TS & Ox Mountain LF
Buyback Centers							
Drop-off Centers							
Other Residential Recycling (list each program separately)							
CRV - Redeemed Beverage Containers	1,576.0	0.0	1,576.0	0.7%	Beverage containers (glass, plastic, and aluminum)	Tons allocated on per capita basis.	Aggregate Volume Report for San Mateo County in 2000; Department of Conservation, Division of Recycling
Subtotal, Residential Recycling	7,694.0	0.0	7,694.0	3.2%			
Residential Composting Activities							
Green Waste Drop-off	1,045.0	N/A	1,045.0	0.4%	Plant material and wood	Assumes 15% of self-hauled green waste reported by BFI is residential.	BFI MIS Reports for 2000; San Carlos TS & Ox Mountain LF
Curbside Green Waste	5,681.0	N/A	5,681.0	2.4%	Plant material, includes Christmas trees	NA	BFI MIS Reports for 2000; San Carlos TS & Ox Mountain LF
Christmas Tree Program							
Other Residential Composting (list each program separately)							
Subtotal, Residential Composting	6,726.0	0.0	6,726.0	2.6%			
Subtotal Residential Diversion	15,142.4	603.2	15,745.6	8.9%			

Diversion Activity	Actual Tons	Estimated or Extrapolated Tons	Total Tons	Relative Percent to Total Generation (A+B)/Total Generation	Specific Material Type(s)	Specific Conversion Factor Used (if any) and Source	Type of Record and Location of Record
<p>Please use the Board's program types. The program type glossary is online at: www.ciwmmb.ca.gov/L/GCcentral/PARIS/Codes/Red</p>							
Non-Residential Source Reduction Activities	(A)	(B)	(A+B)		(List programs with multiple materials together)		
Subtotal Non-Residential Source Reduction	217.5		217.5	0.1%	See Section 9	See Section 9	See Section 9
Other Non-Residential Waste Audits*							
Grasscycling - Redwood City Elementary Schools	5.4	N/A	5.4	0.0%	Grass clippings	250 lbs/1,000 sq. ft./year	ESA 2000 Diversion Study; ESA database; Bob Brown, RC Elementary School District Facilities Manager
Redwood City schools and North Star business - double-sided copying	26.4	N/A	26.4	0.0%	Office paper	5 lbs/ream	ESA 2000 Diversion Study; ESA database; Charlene White, Sequoia High School District; staff from 8 elementary schools; North Star staff
Redwood City schools - furniture salvage	4.2	N/A	4.2	0.0%	Books, computers, desks	Computers: 26 lbs/computer; books: 1.08 to 1.48 lbs/book depending on whether hardback or paperback books; desks: 50 lbs/desk	ESA 2000 Diversion Study; ESA database; Charlene White, Sequoia High School District; staff from 3 elementary schools
Subtotal Non-Residential Source Reduction	253.5	0.0	253.5	0.1%			
Non-Residential Recycling Activities							
Subtotal Non-Residential Recycling	3,120.5		3,120.5	1.3%	See Section 9	See Section 9	See Section 9
Other Non-Residential Waste Audits*							
Commercial Recycling - BFI Franchised Collection	4,184.0	N/A	4,184.0	1.8%	OCC, MP, Bottles & Cans, and plant material from businesses and some multi-family complexes	NA	BFI MIS Report for 2000; San Carlos TS & Ox Mountain LF
Commercial Recycling (includes backhauled materials and recycling by non-BFI commercial recyclers - only includes those generators not included in Section 9 Waste Audits)	425.3	N/A	425.3	0.2%	OCC, plastic wrap, MP, Glass, and Bottles & Cans	NA	ESA 2000 Diversion Study; ESA Database
Subtotal Non-Residential Recycling	4,609.3	0.0	4,609.3	1.9%			
Non-Residential Composting Activities							
Subtotal Non-Residential Composting	5,921.0	N/A	5,921.0	2.5%	Plant material and wood	Assumes 85% of self-hauled green waste reported by BFI is residential.	BFI MIS Reports for 2000; San Carlos TS & Ox Mountain LF
Other Non-Residential Composting (list each program separately)					See Section 9	See Section 9	See Section 9
Green waste drop-off							
Subtotal Non-Residential Composting	5,921.0	N/A	5,921.0	2.5%			
Subtotal Non-Residential Recycling and Composting	10,150.3	0.0	10,150.3	4.2%			
ADC	26,939.1	N/A	26,939.1	11.3%	Auto shredder fluff (12,517.63 tons at Altamont LF and 14,221.58 tons at Kirby Canyon LF); greenwaste (1.79 tons), C&D Debris (198.07 tons).	CIWMB data -- excludes Ox Mountain LF (53,311.22 tons) and Vasco Road LF tons (602.61 tons). Vasco Road LF sludge tons have been modified and are shown below under "Sludge Used as ADC." Ox Mountain LF tons are reported under other collection/recovery programs conducted by the City's franchised hauler prior to use as ADC; see tons under residential and non-residential green waste drop-off and residential curbside green waste programs shown above; see also tons under Transfer Station Recovery at San Carlos TS and Landfill Recovery at Ox Mountain LF programs shown below.	CIWMB Disposal Reporting System Database

Board Meeting
January 14-15, 2003

Diversion Activity	Actual Tons (A)	Estimated or Extrapolated Tons (B)	Total Tons (A+B)	Relative Percent to Total Generation (A+B)/Total Generation	Specific Material Type(s) (List programs with multiple materials together)	Specific Conversion Factor Used (if any) and Source	Type of Record and Location of Record
Sludge Used as ADC	9,222.0	N/A	9,222.0	3.9%	Sludge from the South Bayside System Authority Wastewater Treatment Plant in Redwood City	Supercedes 602.61 tons listed on CIWMB site for Vasco Road LF; signed letter from landfill operator shows that tons were originally misallocated to San Francisco when reported to the CIWMB. See Attachment A.	Landfill weight records, Vasco Road LF
Transfer Station Recovery at San Carlos TS	9,608.0	N/A	9,608.0	4.0%	Material diverted in the transfer station sorter program and aggregate recycling program at the San Carlos Transfer Station.	Actual tons allocated to cities based on the monthly self-haul tonnage received from applicable jurisdictions; diverted material received from city vehicles is allocated directly to the appropriate jurisdiction.	BFI MIS Reports for 2000; San Carlos TS & Ox Mountain LF
Landfill Recovery at Ox Mountain LF	33,156.0	N/A	33,156.0	14.0%	C&D debris, auto shredder material, and concrete and asphalt	None	BFI MIS Reports for 2000; San Carlos TS & Ox Mountain LF
Recycled/Salvaged Material at Santa Clara County Facilities	3,888.6	N/A	3,888.6	1.6%	Wood, gypsum, tile, shingle roofing, white goods, OCC, etc.	None	Quarterly landfill report; Zanker Material Processing Facility and Zanker Road LF
Subtotal Residential/Non-Residential Diversion	62,313.7	603.2	62,916.9	35.9%			
Total Res/Non-Res Source Reduction Tons	975.9	603.2	1,579.1	0.7%			
Total Diversion Tons	111,890.3	603.2	112,493.5	47%			
Total Disposal Tons from Sec.7	125,129.0		125,129.0	52.7%			
Total Generation (Div+Dis)	236,989.3	603.2	237,592.5				
Diversion Rate				47.3%			

Please use the Board's program types. The program type
glossary is online at:
[www.ciwmmb.ca.gov/LG/Central/PARIS/Codes/Red
uce.htm](http://www.ciwmmb.ca.gov/LG/Central/PARIS/Codes/Red
uce.htm)

9. Specific Non-Residential Sector Waste Audits--Top 10 Non-Residential Generators

Please complete this table for the top 10 non-residential generators that were surveyed. List each non-residential generator separately from the largest to smallest, based on total diversion tons. The audit reference number should correspond to the number given your survey sheet.
(Table will perform all calculations).

- ☐ Include an attachment, marked "Attachment 9", which includes a summary of all the generators surveyed and all extrapolation calculations used to estimate the diversion rate:
- ☐ Include copies of survey sheet(s) used.
- ☐ Include for each generator (use type of generator in lieu of specific generator name e.g., grocery store) each specific diversion activity and material type (e.g. cardboard recycling) and the associated tonnage for each diversion activity/material type, and applicable conversion factors/source.
- ☐ If using the number of employees for your extrapolation method, include this information for each generator surveyed.
- ☐ Please order the non-residential generators, largest to smallest, based on total diversion tons.
- ☐ Also, the summary should include the generators that were selected to be surveyed, but did not respond to the survey, and the number of employees at each of these generators.

As a comparison between disposal from the waste audits and DRS, the disposal for each generator must be included in the summary. Also, you should note if the disposal is being used for the extrapolation calculation. For each non-residential generator, the disposal must be broken out by cubic yard, and roll-off or compactor weights. If disposal was estimated for either disposal-based or employment-based extrapolation methods, please include conversion factor(s) for disposal and the source for conversion factor(s). Please provide an explanation as to how the conversion factor(s) is (are) appropriate for your jurisdiction e.g., "Study was conducted to determine average weights using hauler weight tickets."

Type of Non-Residential Generator	Audit Reference Number	Specific Diversion Activities including Material Type (e.g. paper recycling, glass recycling). (List activities on one line)	Number of Employees	Source Reduction Tons	Recycling Tons	Composting Tons	Total Diversion Tons	Percent of Total Generation (Total Diversion Tons/Total Generation in Section 8)	Survey Method (Phone (P) Mail (M) On-site (O) Other)
Supermarket	1	Backhaul cardboard, plastic/shrink wrap and organics.	NA		888		888	0.4%	P
Supermarket	2	Backhaul cardboard, plastic/shrink wrap and organics.	NA		739		739	0.3%	P
Supermarket	3	Backhaul cardboard and plastic/shrink wrap	NA		440		440	0.2%	P
Department Store	4	Cardboard collected by non-BFI recycler	NA		370		370	0.2%	P
Department Store	5	Backhaul cardboard and plastic/shrink wrap	NA		315		315	0.1%	P
Business Tower	6	Glass collected by non-BFI recycler	NA		197		197	0.1%	P
Golf Course	7	Grasscycle on 30-acre course	NA	163			163	0.1%	P
Business Tower	8	Glass collected by non-BFI recycler	NA		112		112	0.0%	P
Department Store	9	Backhaul cardboard.	NA		60		60	0.0%	P
High school	10	Grasscycle on 10-acres of school grounds	NA	55			55	0.0%	P
Totals				218	3,120		3,338	1.4%	

Summarize the non-residential diversion activities for the top 10 generators quantification methodology and applicable conversion factors and sources (e.g., cardboard recycling: quantified by monthly tonnage receipts provided by the contact person at the business).

See Attachment B which includes audit sheets for top 10 non-residential generators.

10. On a separate sheet of paper, marked "Attachment 10," provide the following information for each

A. Describe sampling method including:

- Type of sampling method (for either stratified or cluster sampling, provide detailed information on how strata and clusters were collected)
- Total number of samples included in the survey
- Number of non-respondents and respondents
- Total population
- Source for identifying population (e.g., city business licenses, commercial database, resident's addresses, etc)
- Relation of sample size to total population
- Survey data collection tool(s) and approaches
- Confidence level and margin of error for the sampled population
- Unusual outliers and exceptional anomalies describe in detail

Note: *Outliers (specific generators which fall significantly above or below others) should be removed from base amount prior to extrapolation)*

B. Describe the methods used to prevent double-counting between the surveys and the reported tonnages from haulers, recyclers, materials recycling facilities and composters.

C. Describe extrapolation method, including:

- Basis of extrapolation
- Why this extrapolation method is appropriate
- Sources of information used for extrapolation, such as disposal or employment
- Include all calculations

a. If the diversion program started on or after January 1, 1990, complete the following table.

b. If the diversion program started before January 1, 1990 - and if documentation on the program and waste type has not been approved by the Board - on a separate sheet marked "Attachment 11b," give the program and waste type, and provide documentation that indicates:

- Note:** If documentation for a waste type and program has already been approved by the Board, you do not have to provide an

If documentation is not available, go to 11d.

d. If the diversion program started before January 1, 1990, and the documentation requested in 11b is not available, please

Restricted Waste Type		Specific Program Name	New Base Year	1990 Diversion	Difference
	▼				
	▼				
	▼				
	▼				
	▼				
	▼				

Other Non-Residential Commercial Recycling Identified in Redwood City's 2000 Annual Report												rev. 10/30/01	
Category	OCC	Tons by Material Type					Collected by:	Backhauled	Study	Study	Notes		
		Plastic	Wrap	Organics	MP	Glass						Recyclables	Mixed
Supermarkets	1	218.40	3.10	666.40					887.90	NA	x	x	Audit Reference #1
	2	109.20	4.80	624.80					738.80	NA	x	x	Audit Reference #2
	3	41.00							41.00	NA	x		
	4	34.40							34.40	Recycle Fibers		x	
	5	15.30							15.30	NA	x	x	
									439.71				
	7	31.20							31.20	NA	x	x	
	Subtotal:	886.30	10.81	1,291.20	-	-	-	-	2,188.31				
Department Stores/Retailers													
	Subtotal:	744.90	0.26	-	-	-	-	-	745.16				
Other Businesses													
	1	1.70		5.10					6.80	Enterprise		x	
	2	0.50		27.90					28.40	Enterprise		x	
	3							196.60	196.60	Dotsons			Audit Reference #6
	4							112.30	112.30	Dotsons		x	Audit Reference #8
	Subtotal:	2.20	-	33.00	-	-	-	-	344.10				
Schools/Institutions													
	2							2.40	2.40	WRT		x	
	3							1.10	1.10	WRT		x	
	4							0.70	0.70	WRT		x	
	Subtotal:	-	-	-	-	-	-	-	4.20				
Other Recyclers													
	1			264.00					264.00	Weyerhaeuser		x	
(Collected from 3 small printer co. and Oracle)													
	Subtotal:	-	-	-	-	-	-	-	264.00				
TOTAL		1,633.40	11.07	1,291.20	297.00	308.90	4.20	check:	3,545.77		check:	3,545.77	

Other Non-Residential Commercial Source Reduction Identified in Redwood City's 2000 Annual Report												
Category	Tons by Material Type							1997 Study	2001 Study	Comm'l Outreach Notes		
	Double-sided	Furniture	Salvage	Box	Total	1997	2001					
Golf Course	Grasscycle	copying	Computers	Books	Desks	Reuse	tons					
Emerald Hills Golf Course	163.00						163.00		x			Audit Reference #8
Schools/Institutions	Subtotal:	163.00	0.00	0.00	0.00		163.00					
Sequoia HS, Redwood HS, Sequoia Adult School, John Galt Elementary, Telf Elementary, Hayes Elementary							73.58 2.50 8.08 0.84	x x x x		Donated Donated Donated Donated		
							0.30 0.04 0.10					
Sequoia and Redwood HSs	54.50						54.50	x				Audit Reference #10
Redwood Elementary Schools	5.40						5.40	x				
Roy Cloud Elementary School							1.70	x				
Roosevelt Elementary School							1.10	x				
Henry Ford Elementary School							1.80	x				
Clifford Elementary School							1.20	x				
Pennsula Christian Center							0.40	x				
North Star							1.40	x				
Subtotal:	59.90	26.40	3.76	0.34	0.10		90.50					
TOTAL	222.90	26.40	3.76	0.34	0.10	0.00	253.50					
				check:		253.50						